

WILHELM F. MAIER ET AL.
USSN 09/582,116

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cont.

--14. (Twice Amended) The method according to Claim 1, 3, 4, 5, 10 or 11,
wherein the infrared emission is recorded through a wavelength-specific infrared filter.--

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--15. (Once Amended) The method according to claim 13, wherein surfaces of the
reactor interior space are coated with a paint having an infrared reflectivity close to the infrared
reflectivity of a black body.--

✓
Cancel claims 2 and 6.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time,
Applicants respectfully request that this be considered a petition therefor. The Commissioner is
authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-
1263.

REMARKS

Applicants respectfully request reconsideration and allowance of this application in view
of the amendments above and the following comments.

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Amendments have been made to claims 1, 4, 7-10 and 12-15. A clean copy of these claims is presented above. A mark-up showing the changes that have been made to these claims using brackets and underlining is attached.

Claims 1, 4, 6, 8, 13 and 15 were rejected under 35 USC § 112, second paragraph, as being indefinite. In response, Applicants have amended the claims to clarify matters in a manner which Applicants believe overcomes each of the Examiner's concerns. With respect to concern A, claim 1 is amended to clarify that the image is "obtained by" the indicated subtraction. With respect to concern B, claim 4 is amended to recite "catalyst library." With respect to concern C, claim 4 is amended to clarify that the library consists of catalyst components in the form of "metal or silicon oxides and/or of mixed metal oxides or mixed metal oxides and silicon oxides." With respect to concern D, claims 8 and 15 have been amended to clarify that the infrared reflectivity is close to that of a black body in accordance with the specification at page 5, in the sentence beginning in the fourth line from the bottom of that page. With respect to concern E, claim 13 is amended to clarify that "changes in infrared emission" are recorded. In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw this rejection. An early notice that this rejection has been reconsidered and withdrawn is, therefore, earnestly solicited.

For the record, Applicants emphasize that although the claims were amended in the manner discussed above to overcome this rejection, and, therefore, might be argued to have been



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amended for a reason substantially related to patentability, a fair reading of the amended claims will reveal that the departures from the previous claims were for clarification purposes only, and that Applicants did not narrow the claims in any material respect. Therefore, Applicants submit that the amended claims are entitled to the full range of equivalents.

Claims 1-6 and 9-14 were rejected under 35 USC § 102(e) as being anticipated by or, in the alternative, under 35 USC § 103(a) as being obvious over Wilson, III, U.S. Patent No. 6,063,633. In response, Applicants would remind the Examiner that anticipation requires that each and every element as set forth in the claim must be found, either expressly or inherently described, in a single prior art reference, and, further, if the Examiner relies on a theory of inherency as to any particular element, then the extrinsic evidence must make clear that such element is *necessarily* present in the thing described in the reference, and the presence of such element therein would be so recognized by persons skilled in the art. *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Further, inherency is not established by probabilities or possibilities, and the mere fact that a property *may* result from a given circumstances is not sufficient; instead it must be shown that such property *necessarily* inheres in the thing described in the reference. *Id.* Since Wilson does not teach each and every element of the instant claims, either expressly or inherently, Wilson cannot anticipate the instant claims.

In the middle of page 4 of the Office Action, the Examiner concedes that Wilson does not expressly teach recording a difference image that corresponds to a subtraction of the infrared



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emission recorded prior to the beginning of the processes from the infrared emission recorded during the course of the processes. The Examiner opines that Wilson must inherently teach these limitations, but Applicants respectfully disagree. Wilson only teaches the thermographic measurements of catalyzed reactions in very general terms. Wilson teaches that the "heat liberated or absorbed or absorbed by the respective formulations during the course of the reaction" can be observed (claim 1) and mentions that "thermography, as by an infrared camera recording the temperature at a number of catalyst sites simultaneously is particularly preferred" (column 3, lines 4-6). However, Wilson is silent how this general, incompletely formed idea is to be implemented, and it is not the case that it would *necessarily* have been implemented as presently contemplated. Specifically, Wilson is completely silent as to the explicit use of difference images, and such use according to the present teaching would not have been readily apparent. It certainly is not the case that Wilson's method *necessarily* meets the terms of the instant claims. Consequently, Wilson cannot have inherently anticipated either the original claims or the present claims.

On the issue of obviousness, Wilson lacks any teachings or suggestions that would have led persons skilled in the art to the present invention and, therefore, Wilson could not have rendered the present invention *prima facie* obvious to persons skilled in the art. Furthermore, the present invention permits the recordation of even small heat changes, *which previously had not been measurable*. Such flexibility of the present invention, which overcomes the inadequacies of the prior art, clearly advances the prior art significantly, and, thus, is nonobvious.



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In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw this rejection. An early notice that this rejection has been reconsidered and withdrawn is earnestly solicited.

Applicants believe that the foregoing constitutes a bona fide response to all outstanding objections and rejections.

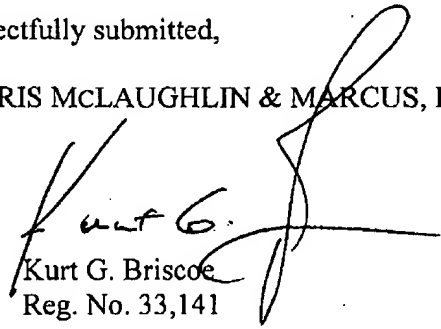
Applicants also believe that this application is in condition for immediate allowance. However, should any issue(s) of a minor nature remain, the Examiner is respectfully requested to telephone the undersigned at telephone number (212) 808-0700 so that the issue(s) might be promptly resolved.

Early and favorable action is earnestly solicited.

Respectfully submitted,

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By


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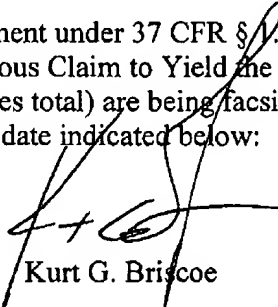
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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that the foregoing Amendment under 37 CFR § 1.111 and the attached Mark-Up Showing the Changes Made in the Previous Claim to Yield the Claim as Amended Above and Petition for Extension of Time (13 pages total) are being facsimile transmitted to the United States Patent and Trademark Office on the date indicated below:

Date: June 25, 2002

By:


Kurt G. Briscoe

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**MARK-UP SHOWING THE CHANGES MADE IN THE PREVIOUS CLAIM TO YIELD
THE CLAIM AS AMENDED ABOVE**

--1. (Twice Amended) A method for the comparative determination of the heat changes caused by physical or chemical processes performed with the aid of catalysts arranged in the form of a catalyst library over the surface of a library plate, wherein a difference image is recorded using an infrared camera, [which] wherein said image [corresponds to] is obtained by a subtraction of the infrared emission recorded prior to the beginning of the processes from the infrared emission recorded during the course of the processes and wherein said library plate consists of a material having an infrared reflectivity close to the infrared reflectivity of a black body.--

--4. (Once Amended) The method according to claim [2] 1, wherein said catalyst [libraries consist] library consists of catalyst components in the form of metal or silicon oxides and/or of mixed metal oxides or mixed metal oxides and silicon oxides, the precursors of which are arranged as aqueous or alcoholic solutions of silicon or metal compounds in the form of their alkoxy derivatives, mixed alkoxy derivatives, alkoxyoxo or acetylacetonate derivatives or in the form of their halides or carboxylates over the surface of the library plate, followed by drying and calcining. --

--7. (Once Amended) The method according to claim [6] 1, wherein said library plate consists of slate. --

--8. (Twice Amended) The method according to Claim [2] 1, 3 or 4, wherein said library plate is coated with a film having [a low infrared reflectivity] an infrared reflectivity close to the infrared reflectivity of a black body.--

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--9. (Twice Amended) The method according to Claim [2] 1, 3, 4 or 5, wherein the region of the surface of the library plate not occupied by catalysts or materials is coated with a non-wetting film.--

--10. (Once Amended) The method according to claim [2] 1, wherein said library plate contains reaction cavities comprising liquid reaction solutions with homogeneous catalysts.--

--12. (Once Amended) The method according to claim [2] 1 or 10, wherein the selectivity or the enantioselectivity of catalyzed reactions is determined on [libraries] the library.--

--13. (Twice Amended) The method according to Claim [2] 1, 4, 5, 10 or 11, wherein the catalysts are within a reactor under reaction conditions and wherein changes in infrared emission are recorded by the externally provided infrared camera through an infrared-transparent window.--

--14. (Twice Amended) The method according to Claim 1, [2,] 3, 4, 5, 10 or 11, wherein the infrared emission is recorded through a wavelength-specific infrared filter.--

--15. (Once Amended) The method according to claim 13, wherein surfaces of the reactor interior space are coated with a paint having [low infrared reflectivity] an infrared reflectivity close to the infrared reflectivity of a black body.--

